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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,532	03/29/2005	Luigi Resconi	FE 6056 (US)	4560
34872	7590	05/29/2007		
BASELL USA INC. INTELLECTUAL PROPERTY 912 APPLETON ROAD ELKTON, MD 21921			EXAMINER LEE, RIP A	
			ART UNIT 1713	PAPER NUMBER
			MAIL DATE 05/29/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/529,532

**Applicant(s)**

RESONI ET AL.

**Examiner**

Rip A. Lee

**Art Unit**

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 13 and 14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 13 and 14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This office action follows a request for continued examination (RCE) under 37 § C.F.R. 1.114, filed on March 13, 2007. Claims 1-3, 13, and 14 are pending.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-3, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bingel *et al.* (WO 98/40416; equivalent U.S. 6,444,606 relied upon for translation).

Bingel *et al.* discloses a catalyst comprising a metallocene having formula (I), in which substituents R<sup>5</sup> and R<sup>5'</sup> are a C<sub>6</sub> aryl group with substituent R<sup>13</sup> in a position *para* to the bonding position on the indenyl ring; specifically, is a *t*-butyl group (claim 1). A representative catalyst is rac-Me<sub>2</sub>Si(2-Me-4-*t*-BuPhInd)<sub>2</sub>ZrCl<sub>2</sub>/MAO supported on silica (preparation example 1), which further contains triisobutylaluminum (polymerization example 4). This is used to prepare ethylene-propylene copolymer (85 mole % C<sub>3</sub>); see tabulated data in experimental section.

The reference does not show an example of preparation of other types of copolymer in the presence of this catalyst. The inventors, however, state that their invention provides for a

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process of copolymerizing one or more olefins (col. 10, lines 5-11). In this connection, there is especially mentioned polymerizing ethene with one or more 1-olefins having 4-20 carbon atoms, *e.g.*, 1-hexene (col. 10, lines 24-27). One having ordinary skill in the art would have found it obvious that preparation of ethylene-hexene copolymer is contemplated by the inventors, and therefore, it would have been obvious to one having ordinary skill in the art to use the catalyst of examples 1 and 4 to prepare ethylene-hexene copolymer. Since this particular catalyst has been shown to work well in incorporating comonomer, one having ordinary skill in the art would have expected to make ethylene-hexene copolymer with this catalyst with a reasonable expectation of success. With regard to the amount, it would have been obvious to one having ordinary skill in the art to make ethylene-hexene copolymer having the claimed comonomer content, especially since the range is variably broad. The skilled artisan also would have found it obvious, absent any showing of criticality and unexpected results, to make ethylene-hexene having similar comonomer content as shown in the example because this is shown to result in a useful material.

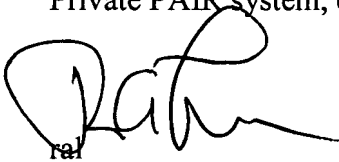
#### ***Response to Arguments***

4. The rejections of claims over Bohnen *et al.* (WO 99/43717), Kratzer *et al.* (WO 01/47635), and Kawasaki *et al.* (U.S. 6,723,794) have been overcome by amendment. Bohnen *et al.* and Kratzer *et al.* teach catalysts containing non-aluminoxane activator for the specific purpose of eliminating use of aluminoxanes. Therefore, these references would not suggest to, or provide sufficient motivation for, one of ordinary skill in the art to arrive at the subject matter of the instant claims. Kawasaki *et al.* does not teach metallocenes described in the amended claims.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

A handwritten signature in black ink, appearing to read 'Rip A. Lee', with a stylized, cursive script.

May 24, 2007